

(a) 100 parts by weight of a polymodal asymmetric elastomeric block copolymer;

(b) at least one midblock-compatible tackifier in an amount sufficient to raise the calculated Fox T_g of the rubber phase of the adhesive to greater than 245°K;

(c) 0 to about 50 parts by weight of a crosslinking agent; and

(d) 0 to about 300 parts by weight of a plasticizer;

wherein the polymodal asymmetric elastomeric block copolymer has the formula Q_nY and comprises from about 4 to about 40 percent by weight of a polymerized monovinyl aromatic compound and from about 96 to about 60 percent by weight of polymerized conjugated diene, wherein:

Q represents an individual arm of the block copolymer and has the formula S-B;

n represents the number of arms Q in the block copolymer and is a whole number of at least 3; and

Y is the residue of a multifunctional coupling agent; and further wherein:

(a) S is a nonelastomeric polymer segment endblock of a polymerized monovinyl aromatic homopolymer, there being at least two different molecular weight endblocks in the copolymer, a higher molecular weight endblock and a lower molecular weight endblock, wherein:

(i) the number average molecular weight of the higher molecular weight endblock $(M_n)H$ is in the range of from about 5,000 to about 50,000;

(ii) the number average molecular weight of the lower molecular weight endblock $(M_n)L$ is in the range of from about 1,000 to about 10,000; and

(iii) the ratio $(M_n)H / (M_n)L$ is at least 1.25; and

(b) B is an elastomeric polymer segment midblock which connects each arm to the residue of a multifunctional coupling agent (Y) and comprises a polymerized conjugated diene or combination of conjugated dienes; and

wherein the adhesive is coated forms a layer on at least a portion of at least one of the major surfaces of the backing and the article exhibits a 180° peel adhesion on high density polyethylene of at least 80 N/dm.

9. (Currently amended) The ~~pressure-sensitive adhesive article~~ according to claim 8, wherein ~~said~~ the backing is comprises a foam core.

10. (Currently amended) The ~~pressure sensitive adhesive article~~ according to claim 8, wherein ~~said the~~ backing further comprises a release surface.

11. (Currently amended) The ~~pressure sensitive adhesive article~~ according to claim 8, wherein ~~said the~~ backing ~~is~~ comprises a foam tape ~~core made of~~ comprising the same or a different polymodal asymmetric elastomeric block copolymer, and ~~said the~~ adhesive is in the form of ~~at least one co-extruded~~ a layer on at least one of the major surfaces of said the foam tape ~~core~~.

12. (Currently amended) The ~~pressure sensitive adhesive article~~ according to claim 8, wherein ~~said the~~ backing ~~is~~ comprises an acrylic foam tape core, and ~~said the~~ adhesive is in the form of at least one co-extruded layer on ~~said the~~ foam tape core.

13. (Currently amended) The An article comprising a pressure sensitive adhesive according to claim 8 in combination with a backing having first and second major surfaces, wherein ~~said the~~ backing is in the form of a foam, at least one of the major surfaces of which is substantially smooth having an Ra value less than about 75 micrometers, as measured by laser triangulation profilometry, and ~~said the~~ foam comprises a plurality of microspheres, at least one of which is an expandable polymeric microsphere, the adhesive having a rubber phase and comprising:

(a) 100 parts by weight of a polymodal asymmetric elastomeric block copolymer;

(b) at least one midblock-compatible tackifier in an amount sufficient to raise the calculated Fox T_g of the rubber phase of the adhesive to greater than 245°K;

(c) 0 to about 50 parts by weight of a crosslinking agent; and

(d) 0 to about 300 parts by weight of a plasticizer;

wherein the polymodal asymmetric elastomeric block copolymer has the formula Q_nY and comprises from about 4 to about 40 percent by weight of a polymerized monovinyl aromatic compound and from about 96 to about 60 percent by weight of polymerized conjugated diene, wherein:

Q represents an individual arm of the block copolymer and has the formula S-B;

n represents the number of arms Q in the block copolymer and is a whole number of at least 3; and

Y is the residue of a multifunctional coupling agent; and further wherein:

(a) S is a nonelastomeric polymer segment endblock of a polymerized monovinyl aromatic homopolymer, there being at least two different molecular weight endblocks in the copolymer, a higher molecular weight endblock and a lower molecular weight endblock, wherein:

(i) the number average molecular weight of the higher molecular weight endblock (Mn)H is in the range of from about 5,000 to about 50,000;

(ii) the number average molecular weight of the lower molecular weight endblock (Mn)L is in the range of from about 1,000 to about 10,000; and

(iii) the ratio (Mn)H/(Mn)L is at least 1.25; and

(b) B is an elastomeric polymer segment midblock which connects each arm to the residue of a multifunctional coupling agent (Y) and comprises a polymerized conjugated diene or combination of conjugated dienes; wherein the adhesive forms a layer on at least a portion of at least one of the major surfaces of the backing and the article exhibits a 180° peel adhesion on high density polyethylene of at least 80 N/dm.

Claims 14 – 16 (Cancelled)

17. (Currently amended) The An article comprising a pressure sensitive adhesive according to claim 15 in the form of a foam having at least one substantially smooth major surface having an Ra value less than about 75 micrometers, as measured by laser triangulation profilometry, the foam comprising a plurality of expandable polymeric microspheres in combination with at least one other polymer composition in the form of a plurality of discrete structures bonded to or embedded in said the foam, and the adhesive having a rubber phase and comprising:

(a) 100 parts by weight of a polymodal asymmetric elastomeric block copolymer;

(b) at least one midblock-compatible tackifier in an amount sufficient to raise the calculated Fox T_g of the rubber phase of the adhesive to greater than 245°K;

(c) 0 to about 50 parts by weight of a crosslinking agent; and

(d) 0 to about 300 parts by weight of a plasticizer;

wherein the polymodal asymmetric elastomeric block copolymer has the formula QnY and comprises from about 4 to about 40 percent by weight of a

polymerized monovinyl aromatic compound and from about 96 to about 60 percent by weight of polymerized conjugated diene, wherein:

Q represents an individual arm of the block copolymer and has the formula S-B;

n represents the number of arms Q in the block copolymer and is a whole number of at least 3; and

Y is the residue of a multifunctional coupling agent; and further wherein:

(a) S is a nonelastomeric polymer segment endblock of a polymerized monovinyl aromatic homopolymer, there being at least two different molecular weight endblocks in the copolymer, a higher molecular weight endblock and a lower molecular weight endblock, wherein:

(i) the number average molecular weight of the higher molecular weight endblock (Mn)H is in the range of from about 5,000 to about 50,000;

(ii) the number average molecular weight of the lower molecular weight endblock (Mn)L is in the range of from about 1,000 to about 10,000; and

(iii) the ratio (Mn)H/(Mn)L is at least 1.25; and

(b) B is an elastomeric polymer segment midblock which connects each arm to the residue of a multifunctional coupling agent (Y) and comprises a polymerized conjugated diene or combination of conjugated dienes;

wherein the foam adhesive exhibits a 180° peel adhesion on high density polyethylene of at least 80 N/dm.

Claims 18 – 27 (Cancelled)

28. (New) An article according to claim 13 wherein the adhesive comprises a blend of the polymodal asymmetric elastomeric block copolymer and a polymer suitable for melt extrusion processing.

29. (New) An article according to claim 28 wherein the polymer comprises an acrylate or methacrylate adhesive polymer or copolymer, an acrylate-insoluble polymer, an elastomer containing ultraviolet radiation-activatable groups, or a pressure sensitive or hot melt adhesive prepared from non-photopolymerizable monomers.

30. (New) An article according to claim 28 wherein the polymer comprises a copolymer of an acrylate or methacrylate monomer and a monoethylenically unsaturated co-monomer.
31. (New) An article according to claim 30 wherein the monoethylenically unsaturated co-monomer comprises acrylic acid.
32. (New) An article according to claim 13 wherein the backing comprises an elastomeric block copolymer foam.
33. (New) An article according to claim 13 wherein the backing comprises a polymodal asymmetric elastomeric block copolymer foam.
34. (New) An article according to claim 13 wherein the backing comprises an acrylic foam.
35. (New) An article according to claim 13 wherein at least one adhesive layer is crosslinked.
36. (New) An article according to claim 13 wherein the article exhibits a 180° peel adhesion on high density polyethylene of at least 100 N/dm.
37. (New) An article comprising a foam backing having first and second major surfaces and an adhesive layer on at least a portion of at least one of the major surfaces wherein the article exhibits a 180° peel adhesion on high density polyethylene of at least 80 N/dm, and at least one of the foam backing or adhesive has a rubber phase and comprises:
 - (a) 100 parts by weight of a polymodal asymmetric elastomeric block copolymer;
 - (b) at least one midblock-compatible tackifier in an amount sufficient to raise the calculated Fox T_g of the rubber phase to greater than 245°K;
 - (c) 0 to about 50 parts by weight of a crosslinking agent; and
 - (d) 0 to about 300 parts by weight of a plasticizer;

wherein the polymodal asymmetric elastomeric block copolymer has the formula Q_nY and comprises from about 4 to about 40 percent by weight of a polymerized monovinyl aromatic compound and from about 96 to about 60 percent by weight of polymerized conjugated diene, wherein:

Q represents an individual arm of the block copolymer and has the formula S-B;

n represents the number of arms Q in the block copolymer and is a whole number of at least 3; and

Y is the residue of a multifunctional coupling agent; and further wherein:

(a) S is a nonelastomeric polymer segment endblock of a polymerized monovinyl aromatic homopolymer, there being at least two different molecular weight endblocks in the copolymer, a higher molecular weight endblock and a lower molecular weight endblock, wherein:

(i) the number average molecular weight of the higher molecular weight endblock $(M_n)_H$ is in the range of from about 5,000 to about 50,000;

(ii) the number average molecular weight of the lower molecular weight endblock $(M_n)_L$ is in the range of from about 1,000 to about 10,000; and

(iii) the ratio $(M_n)_H / (M_n)_L$ is at least 1.25; and

(b) B is an elastomeric polymer segment midblock which connects each arm to the residue of a multifunctional coupling agent (Y) and comprises a polymerized conjugated diene or combination of conjugated dienes.

38. (New) An article according to claim 37 wherein the foam backing comprises polymodal asymmetric elastomeric block copolymer.

39. (New) An article according to claim 37 wherein the foam backing comprises an acrylic foam.

40. (New) An article according to claim 37 wherein at least one of the adhesive layers comprises polymodal asymmetric elastomeric block copolymer.

41. (New) An article according to claim 37 wherein at least one of the adhesive layers comprises a copolymer of an acrylate or methacrylate monomer and a monoethylenically unsaturated co-monomer.

42. (New) An article according to claim 37 wherein the foam backing or at least one adhesive layer is crosslinked.
43. (New) An article according to claim 37 wherein the foam backing and the adhesive layers on the first and second major surfaces comprise polymodal asymmetric elastomeric block copolymer.
44. (New) An article according to claim 37 wherein the adhesive layer on the first major surface comprises polymodal asymmetric elastomeric block copolymer and the adhesive layer on the second major surface comprises an acrylic adhesive.
45. (New) An article according to claim 37 wherein the article exhibits a 180° peel adhesion on high density polyethylene of at least 100 N/dm.
46. (New) An article according to claim 9 wherein the backing is co-extruded with the pressure sensitive adhesive.
47. (New) An article according to claim 8 wherein the backing comprises a foam tape comprising a polymodal asymmetric elastomeric block copolymer.
48. (New) An article according to claim 47 wherein the pressure sensitive adhesive is a layer coextruded with the backing.
49. (New) An article according to claim 44 wherein the foam backing comprises an acrylic foam.